

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (currently amended): A method for inspecting a head unit moving device, the method comprising the steps of:

running aan inspection use tape in which a servo signal is written so as to meander, displaced in a width direction of a magnetic tape at a predetermined frequency and amplitude;

measuring a position of a head unit practically moved in a width direction of said inspection use tape in response to said servo signal; and calculating a difference between the position and a position to be instructed so as to move said head unit in response to said servo signal,

wherein said head unit moving device moves said head unit having a servo signal reading head, a data signal recording head, and a data signal reproducing head in the width direction of said magnetic tape in response to said servo signal read from said magnetic tape by said servo signal reading head.

2. (currently amended): A manufacture method of an inspection use tape used for an inspection of a magnetic tape drive,

wherein with displacing a servo signal writing head writing a servo signal in a magnetic tape so as to meander in a width direction of said magnetic tape at a predetermined frequency and amplitude, the servo signal is written in said magnetic tape.

3. (currently amended): A manufacture method of an inspection use tape used for an inspection of a magnetic tape drive,

wherein with displacing a servo signal writing head writing a servo signal in a magnetic tape so as to meander in a width direction of said magnetic tape at a predetermined amplitude and different frequencies, the servo signal is written in said magnetic tape.

4. (original): A manufacture method of an inspection use tape according to claim 2, wherein a tape edge detector detecting a position of a tape edge of said magnetic tape is disposed directly near said servo signal writing head, and said servo signal writing head is displaced in the width direction of said magnetic tape so as to cancel out variations in the width direction of said magnetic tape, based on an inspection result of said tape edge detector.

5. (original): A manufacture method of an inspection use tape according to claim 3, wherein a tape edge detector detecting a position of a tape edge of said magnetic tape is disposed directly near said servo signal writing head, and said servo signal writing head is displaced in the width direction of said magnetic tape so as to cancel out variations in the width direction of said magnetic tape, based on an inspection result of said tape edge detector.

6. (previously presented): An inspection use tape manufactured by the manufacture method of the inspection use tape according to claim 2.

7. (previously presented): An inspection use tape manufactured by the manufacture method of the inspection use tape according to claim 3.

8. (previously presented): An inspection use tape manufactured by the manufacture method of the inspection use tape according to claim 4.

9. (previously presented): An inspection use tape manufactured by the manufacture method of the inspection use tape according to claim 5.

10. (original): An inspection apparatus of a head unit moving device according to claim 1, which is equipped with a device reel, a device reel driving device rotationally driving said device reel, a tape reel driving device rotationally driving a tape reel, a head unit having a servo signal reading head reading a servo signal written in an inspection use tape, an optical sensor detecting a position of said head unit, and a responsivity inspecting circuit inspecting a responsivity of the head unit by calculating a difference between a position to be instructed so as to move the head unit in response to a servo signal read from said inspection use tape and a position detected by said optical sensor.

11. (original): A servo writer to implement the manufacture method of the inspection use tape according to claim 2, which is equipped with a supply reel supplying a magnetic tape, a winding reel winding the magnetic tape supplied from the supply reel, a winding reel driving device driving the winding reel, a servo signal writing head writing a servo signal in said magnetic tape, and a head moving device displacing said servo signal writing head in the width direction of said magnetic tape at a predetermined frequency and amplitude.

12. (original): A servo writer to implement the manufacture method of the inspection use tape according to claim 3, which is equipped with a supply reel supplying a magnetic tape, a winding reel winding the magnetic tape supplied from the supply reel, a winding reel driving device driving the winding reel, a servo signal writing head writing a servo signal in said magnetic tape, and a head moving device displacing said servo signal writing head in the width direction of said magnetic tape at a predetermined amplitude and different frequencies.

13. (original): A servo writer according to claim 11 which is equipped with a tape edge detector detecting a position of a tape edge of said magnetic tape directly near said servo signal writing head,

wherein said head moving device displaces said head unit so as to cancel out variations of the width direction of said magnetic tape based on a detection result detected by said tape edge detector.

14. (original): A servo writer according to claim 12 which is equipped with a tape edge detector detecting a position of a tape edge of said magnetic tape directly near said servo signal writing head,

wherein said head moving device displaces said head unit so as to cancel out variations of the width direction of said magnetic tape based on a detection result detected by said tape edge detector.

15. (currently amended): A servo writer of an inspection use tape according to claim 11, wherein a head moving meansdevice is a piezoelectric element.

16. (currently amended): A servo writer of an inspection use tape according to claim 12, wherein a head moving meansdevice is a piezoelectric element.

17. (currently amended): A servo writer of an inspection use tape according to claim 13, wherein said head moving meansdevice is a piezoelectric element.

18. (new): A method for inspecting a head unit moving device according to claim 1, wherein variations in the width direction of the inspection use tape are canceled out based on an inspection result of a tape edge detector which detects a position of a tape edge of the magnetic tape being disposed directly near a servo signal writing head, and the servo signal writing head is displaced in the width direction of the magnetic tape.

19. (new): A method for inspecting a head unit moving device according to claim 18, wherein the tape edge detector comprises a projector disposed on an upper side of the magnetic tape and a receiver disposed on a lower side of the magnetic tape so as to pinch the magnetic tape in a thickness direction.

20. (new): A method for inspecting a head unit moving device according to claim 19, wherein the projector irradiates light to a side of the magnetic tape and a half of the irradiated light is radiated inside the width direction from a tape edge of the magnetic tape, and the other half of the irradiated light is radiated outside the width direction from the tape edge of the magnetic tape, and

wherein the receiver receives the half of the irradiated light.

21. (new): A method for inspecting a head unit moving device according to claim 20, wherein when the receiver receives an increase or a decrease in the amount of irradiated light with respect to a reference position of the tape edge of the magnetic tape, the position of the magnetic tape is displaced and variations in the width direction of the inspection use tape are detected.

22. (new): A method for inspecting a head unit moving device according to claim 18, wherein the inspection result is input to a control unit and the control unit sends a corresponding control signal to a head moving device which displaces the servo signal writing head so as to cancel out variations of the width direction of the magnetic tape.

23. (new): A method for inspecting a head unit moving device according to claim 1, wherein the servo signal reading head of the head unit reads the servo signal and generates a read signal that is output to a control unit and a responsivity circuit, and wherein the head unit is moved in the width direction of the inspection tape and the head unit adjusts positions of the data signal recording head and the data signal reading head in corresponding data bands of the inspection use tape.

24. (new): A method for inspecting a head unit moving device according to claim 1, wherein the servo signal is written displaced on the magnetic tape at the predetermined frequency in the width direction of the magnetic tape.

25. (new): A method for inspecting a head unit moving device according to claim 1, wherein the servo signal is a time-based servo signal comprising a bottom-open-reverse-V shape pattern.

26. (new): A manufacture method of an inspection use tape according to claim 2, wherein the servo signal is a time-based servo signal comprising a bottom-open-reverse-V shape pattern.

27. (new): A manufacture method of an inspection use tape according to claim 3, wherein the servo signal is a time-based servo signal comprising a bottom-open-reverse-V shape pattern.

28. (new): A method for inspecting a head unit moving device according to claim 25, wherein the bottom-open-reverse-V shape pattern comprises a plurality of pattern lines, each of the plurality of pattern lines has a linear slope.

29. (new): A manufacture method of an inspection use tape according to claim 26, wherein the bottom-open-reverse-V shape pattern comprises a plurality of pattern lines, each of the plurality of pattern lines has a linear slope.

30. (new): A manufacture method of an inspection use tape according to claim 27, wherein the bottom-open-reverse-V shape pattern comprises a plurality of pattern lines, each of the plurality of pattern lines has a linear slope.